

1. Record Nr.	UNINA9910778922503321
Autore	Green M (Mark)
Titolo	Mumford-Tate groups and domains [[electronic resource]] : their geometry and arithmetic // Mark Green, Phillip Griffiths, Matt Kerr
Pubbl/distr/stampa	Princeton, : Princeton University Press, 2012
ISBN	1-280-49465-4 9786613589880 1-4008-4273-5
Edizione	[Course Book]
Descrizione fisica	1 online resource (298 p.)
Collana	Annals of mathematics studies ; ; no. 183
Classificazione	SI 830
Altri autori (Persone)	GriffithsPhillip <1938-> KerrMatthew D. <1975->
Disciplina	516.35
Soggetti	Mumford-Tate groups Geometry, Algebraic
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Frontmatter -- Contents -- Introduction -- Chapter I. Mumford-Tate Groups -- Chapter II. Period Domains and Mumford-Tate Domains -- Chapter III. The Mumford-Tate Group of a Variation of Hodge Structure -- Chapter IV. Hodge Representations and Hodge Domains -- Chapter V. Hodge Structures With Complex Multiplication -- Chapter VI. Arithmetic Aspects of Mumford-Tate Domains -- Chapter VII. Classification of Mumford-Tate Subdomains -- Chapter VIII. Arithmetic of Period Maps of Geometric Origin -- Index
Sommario/riassunto	Mumford-Tate groups are the fundamental symmetry groups of Hodge theory, a subject which rests at the center of contemporary complex algebraic geometry. This book is the first comprehensive exploration of Mumford-Tate groups and domains. Containing basic theory and a wealth of new views and results, it will become an essential resource for graduate students and researchers. Although Mumford-Tate groups can be defined for general structures, their theory and use to date has mainly been in the classical case of abelian varieties. While the book does examine this area, it focuses on the nonclassical case. The general theory turns out to be very rich, such as in the unexpected connections of finite dimensional and infinite dimensional representation theory of

real, semisimple Lie groups. The authors give the complete classification of Hodge representations, a topic that should become a standard in the finite-dimensional representation theory of noncompact, real, semisimple Lie groups. They also indicate that in the future, a connection seems ready to be made between Lie groups that admit discrete series representations and the study of automorphic cohomology on "ients of Mumford-Tate domains by arithmetic groups. Bringing together complex geometry, representation theory, and arithmetic, this book opens up a fresh perspective on an important subject.

2. Record Nr.	UNINA9910830194403321
Autore	Vorst Andre vander <1935->
Titolo	RF/microwave interaction with biological tissues // Andre Vander Vorst, Arye Rosen, Youji Kotsuka
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, , c2006 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2006]
ISBN	1-280-34967-0 9786610349678 0-470-24712-6 0-471-75205-3 1-61583-615-2 0-471-75204-5
Descrizione fisica	1 online resource (346 p.)
Collana	Wiley series in microwave and optical engineering ; ; 181
Altri autori (Persone)	RosenArye KotsukaYouji <1941->
Disciplina	537.5344 612.01448 612/.01448
Soggetti	Radio waves - Physiological effect Microwaves - Physiological effect Microwave heating - Therapeutic use
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.

Nota di contenuto

Preface. -- Introduction. -- 1 Fundamentals of Electromagnetics. -- 1.1 RF and Microwave Frequency Ranges. -- 1.2 Fields. -- 1.3 Electromagnetics. -- 1.4 RF and Microwave Energy. -- 1.5 Penetration in Biological Tissues and Skin Effect. -- 1.6 Relaxation, Resonance, and Display. -- -- 1.7 Dielectric Measurements. -- 1.8 Exposure. -- References. -- Problems. -- 2 RF/Microwave Interaction Mechanisms in Biological Materials. -- 2.1 Bioelectricity. -- 2.2 Tissue Characterization. -- 2.3 Thermodynamics. -- 2.4 Energy. -- References. -- Problems. -- 3 Biological Effects. -- 3.1 Absorption. -- 3.2 Nervous System. -- 3.3 Cells and Membranes. -- 3.4 Molecular Level. -- 3.5 Low-Level Exposure and ELF Components. -- 3.6 Ear, Eye, and Heart. -- 3.7 Influence of Drugs. -- 3.8 Nonthermal, Microthermal, and Isothermal Effects. -- 3.9 Epidemiology Studies. -- 3.10 Interferences. -- 3.11 Radiation Hazards and Exposure Standards. -- References. -- Problems 150 -- 4 Thermal Therapy. -- 4.1 Introduction to Thermotherapy. -- 4.2 Heating Principle. -- 4.3 Hyperthermia. -- 4.4 Method of Thermometry. -- References. -- Problems. -- 5 EM Wave Absorbers Protecting Biological and Medical Environment. -- 5.1 Foundation of EM Wave Absorbers. -- 5.2 Classification of Wave Absorbers. -- 5.3 Fundamental Principle. -- 5.4 Fundamental Theory of EM Wave Absorbers. -- 5.5 Application of EM Absorber. -- 5.6 EM Wave Absorbers Based on Equivalent Transformation Method of Material Constant. -- 5.7 Method for Improving RF Field Distribution in a Small Room. -- References. -- Problems. -- 6 RF/Microwave Delivery Systems for Therapeutic Applications. -- 6.1 Introduction. -- 6.2 Transmission Lines and Waveguides for Medical Applications. -- 6.3 Antennas. -- 6.4 RF and Microwave Ablation. -- 6.5 Perfusion Chamber. -- 6.6 RF Gastroesophageal Reflux Disease. -- 6.7 Endometrial Ablation. -- 6.8 Microwave Measurement Techniques: Examples. -- 6.9 Future Research. -- References. -- Problems. -- Index.

Sommario/riassunto

From engineering fundamentals to cutting-edge clinical applications This book examines the biological effects of RF/microwaves and their medical applications. Readers will discover new developments in therapeutic applications in such areas as cardiology, urology, surgery, ophthalmology, and oncology. The authors also present developing applications in such areas as cancer detection and organ imaging. Focusing on frequency ranges from 100 kHz to 10 GHz, RF/Microwave Interaction with Biological Tissues is divided into six chapters: * Fundamentals in Electromagnetics--examines penetration of RF/microwaves into biological tissues; skin effect; relaxation effects in materials and the Cole-Cole model (display); the near field of an antenna; blackbody radiation and the various associated laws; and microwave measurements. * RF/Microwave Interaction Mechanisms in Biological Materials--includes a section devoted to the fundamentals of thermodynamics and a discussion on energy and entropy. * Biological Effects--investigates the effects of radio frequency fields on the nervous system, the brain and spinal cord, the blood-brain barrier, and cells and membranes. * Thermal Therapy--includes a description of applicators and an extensive discussion on the foundation of dielectric heating and inductive heating. * EM-Wave Absorbers Protecting the Biological and Medical Environment--investigates materials for EM-wave absorbers from both a theoretical and applications perspective. Special attention is given to ferrite absorbers. * RF/Microwave Delivery Systems for Therapeutic Applications--begins with the fundamental features of major components used in RF/microwave delivery systems for therapeutic applications. New research towards the development of future measurement techniques is also presented. The book features

problem sets at the end of each chapter, making it an excellent introduction for bioengineering and engineering students. Researchers, physicians, and technicians in the field will also find this an excellent reference that offers all the fundamentals, the most cutting-edge applications, and insight into future developments. An Instructor's Manual presenting detailed solutions to all the problems in the book is available from the Wiley editorial department.
